

## ABSTRACT OF THE DISCLOSURE

A system and method for superimposing a sequence number of a packet into the CRC segment of the packet thereby allowing more bandwidth in the payload portion of the packet for carrying data is described. Also  
5 described is a method of acquiring additional information on the type of error in a packet, *e.g.*, data transmission errors or sequence errors, from analyzing a CRC error. For example, a reported CRC error can be the result of the receipt of a packet with a sequence number the receiver is not expecting (which is a normal occurrence on transmission links due to transmitters resending packets  
10 that a receiver has already accepted) or can result from a real error in the transmission of a packet.. A first error code check (CRC) value is calculated for the payload segment of a data packet. A second CRC value is calculated for the sequence number of the data packet. The first CRC value and the second CRC value are combined thereby creating a third CRC value. The  
15 third CRC value is then combined with the payload segment of the data packet thereby creating a data packet that can be transmitted across the link.